

Sustainable farming systems

E. Kabourakis
Ecological Production Systems Unit
National Agricultural Research Foundation
P.O Box 2229, 71003 HERAKLION, Crete GREECE
Tel. +30 2810 245851 Fax. +30 2810 245873
ekab@nagref-her.gr

Modern farming systems

- The process of modernization in agriculture has produced different types of farming systems
 - Traditional
 - Low input
 - Highly industrialized (precision agriculture)

Farming systems

■ Intensive

- High levels of inputs used on a small area of land

■ Low input

- Low levels of inputs used on a small area of land
 - Organic and integrated farming

■ Extensive

- Few inputs on a large area of land

■ Mixed

- Include both livestock and crops

Farming systems

- **The main farming systems are monocrop farming systems and/or monoanimal enterprises**
 - e.g. wheat, cotton, olive orchard etc.
 - e.g. cows, pork, etc.

Food trends

- Expansion of longer and complex chains
- Questions on food quality and rejection of conventional food by consumers
- Increased demand for organic products developed countries
- Development of quality assurance systems
 - e.g ISO standards, HACCP, GAP, GMP, EUREPGAP, etc.

The consumer

Am I being poisoned?

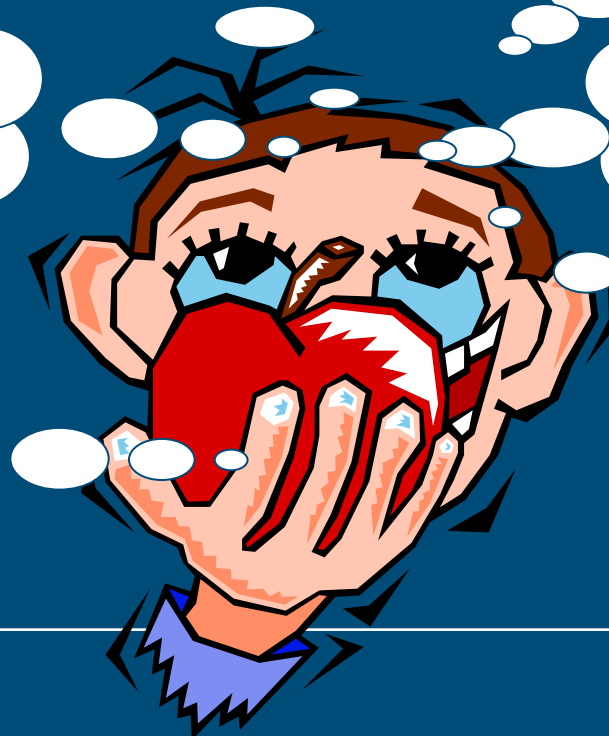
**Where does it
come from ?**

**Is it a GMO
product?**

Is it carcinogenic?

**Do antibiotics
affect my
immune system?**

**Did the farmer
polluted land
& water...**



Why sustainable farming systems?

- To obtain healthier and safe food products?
- Provide physical traceability in the food chain?
- To satisfy consumer expectations and requirements?
- To favour animal welfare?
- To have healthier surrounding for the farmer and workers?
- To support local production and small holders?
- As a solution for environmental problems?
- To slow down ozone layer depletion and prevent climate change?
- Is it a way to have sustainability at rural areas and farms?
- Is it a way to increase income?
- A fashion?

Why sustainable farming systems?

- Today civil society is more conscious about pollutants and their effect on human and animal health and on environment and pays more attention to ethical concerns
- Civil society is more concern about and critical on aspects of conventional farming like the:
 - disturbance of the soil structure, environment and traditional landscape,
 - high energy consumption,
 - long distance nutrient transfers
 - intensive and unhealthy environments for the animals